#### In-Depth



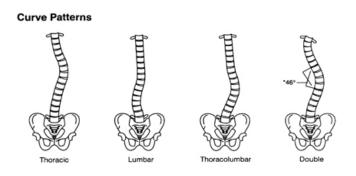
## **Overview**

## **Points To Remember About Scoliosis**

- Scoliosis is a disorder in which there is a sideways curve of the spine.
- People of all ages can have scoliosis. The most common type (idiopathic) is caused by unknown factors and typically occurs in children ages 10 to 12 and in their early teens.
- People with milder curves may only need to visit their doctor for regular check-ups. Some people who have scoliosis need treatment, such as braces or surgery.
- Your doctor may take a medical history, give you a physical examination, and take x-rays to diagnose you with scoliosis.

Scoliosis is a disorder in which there is a sideways curve of the spine. Curves are often S-shaped or C-shaped. In most people, there is no known cause for this curve. Curves frequently follow patterns that have been studied in previous patients (see "Curved patterns of the spine" diagram).

People with milder curves may just need to visit their doctor for regular check-ups. Some people who have scoliosis require treatment.



Curved patterns of the spine

### Who Gets

People of all ages can have scoliosis. The most common type is caused by unknown factors, and typically occurs in children age 10 to 12 and in their early teens. Girls are more likely than boys to have this type of scoliosis. You are more likely to have scoliosis if your parent, brother or sister have it.

# **Symptoms**

Scoliosis is a disorder in which there is a sideways curve of the spine. Signs of scoliosis can include:

- Uneven shoulders.
- Head that is not centered.
- Sides of the body are not level with each other.
- One side of the rib cage is higher than the other when bending forward.

## **Causes**

In most cases, the cause of scoliosis is unknown. Causes of curves are classified as:

- Nonstructural (functional) scoliosis. A structurally normal spine that temporarily
  appears curved. It is caused by a condition such as a difference in leg length, muscle
  spasms, or appendicitis. Doctors treat this type of scoliosis by correcting the underlying
  problem.
- **Structural scoliosis.** A curve that can be caused by disease, birth defect, injury, infection, tumors, connective tissue disorders, or unknown factors.

# **Diagnosis**

Your doctor may do the following to diagnosis you with scoliosis:

- Medical history to look for medical problems that might be causing your spine to curve.
- Physical examination to look at your back, chest, pelvis, legs, feet, and skin.
- X-rays to measure the curve of the spine. This information is used to determine how to treat scoliosis.

## **Treatment**

Your doctor may recommend the following treatments:

- **Observation.** If the curve is mild and your skeleton is still growing, your doctor will reexamine you every few months.
- **Bracing.** If the curve is moderate and you are still growing, your doctor may recommend a brace to keep the curve from getting any worse. Braces must be selected for the specific curve problem and fitted to each patient. Braces must be worn every day for the full number of hours prescribed by the doctor.
- **Surgery.** If you are still growing and have a severe curve that is getting worse, your doctor may suggest surgery. This often involves fusing together two or more bones in the spine. The doctor may also put in a metal rod or other device to help keep the spine straight after surgery. You should seek the advice of at least two experts, and ask about the benefits and risks of the surgery.

The following treatments have not been shown to keep curves from getting worse in scoliosis:

- Chiropractic treatment.
- Electrical stimulation.
- Nutritional supplements.

## **Living With**

Exercise programs have not been shown to keep scoliosis from getting worse. But it is important for all people, including those with scoliosis, to exercise and remain physically fit. Weightbearing exercise, such as walking, running, soccer, and gymnastics, helps keep bones strong. For both boys and girls, exercising and playing sports can improve their sense of well-being.

# **Research Progress**

Research on scoliosis has focused on:

Factors that may cause scoliosis, in an effort to identify targets for prevention and new

treatments.

- Improved education for healthcare providers, to better guide decisions about treatment options.
- How a variety of braces, surgical procedures, and surgical instruments can be used to straighten the spine or to prevent the curve from getting worse.
- Long-term effects of scoliosis fusion and of untreated scoliosis.

### **Related Resources**

### **U.S. Food and Drug Administration**

Toll free: 888-INFO-FDA (888-463-6332)

Website: https://www.fda.gov

Drugs@FDA at <a href="https://www.accessdata.fda.gov/scripts/cder/daf/">https://www.accessdata.fda.gov/scripts/cder/daf/</a>. Drugs@FDA is a searchable catalog of FDA-approved drug products.

#### Centers for Disease Control and Prevention, National Center for Health Statistics

Website: https://www.cdc.gov/nchs

Scoliosis Research Society Website: https://www.srs.org

### **American Physical Therapy Association**

Website: <a href="https://www.apta.org">https://www.apta.org</a>

National Scoliosis Foundation
Website: https://www.scoliosis.org

If you need more information about available resources in your language or other languages, please visit our webpages below or contact the NIAMS Information Clearinghouse at NIAMSInfo@mail.nih.gov.

- Asian Language Health Information
- Spanish Language Health Information

#### Join a Clinical Trial

Join a Clinical Trial

#### View/Download/Order Publications

Scoliosis, Easy-to-Read Fast Facts

Exercise for Your Bone Health

Rosacea, Questions and Answers about